

# CLIENT FREE ISSUE GUIDELINES

This document is intended to assist clients in the preparation of free issue materials for delivery to Norcott's Assembly Operation. For more detailed information please request a copy of document SF-006.

## Chip Components

The preferred format for small SMT components is Tape and Reel. Ideally these should be left on the original manufacturer's reel with at least 60 mm of free leader and cover tape for attachment to the machine.

Additional components need to be supplied over and above the quantity actually required for the build - we would suggest:

Required for Build	Add for placement machine setup and attrition
1 - 499	50
500 - 999	75
1000 - 4999	100
5000 +	150

Due to equipment performance reasons, 0402 components must always be supplied on original manufacturer's reels.

## SOIC's

For component quantities in excess of 500, the preferred format is Tape and Reel. If components are in tubes/sticks it is essential that the devices are not randomly orientated and please ensure that tubes are sealed using manufacturers 'pegs' or 'bung's'. Please do not use 'Sellotape' or equivalent to seal tube ends.

## Quad Flat Pack (QFP PQFP SQFP TQFP TSOP)

We advise to always supply these unopened in the manufacturers original JEDEC Trays. These should never be supplied in plastic boxes containing foam as our experience shows that lead damage frequently results during transportation and lead straightening is usually required before use. Any QFP devices not suitably packaged will be rejected or subject to a Concession.

## Ball Grid Arrays

For production quantities these should be supplied unopened in the manufacturers original trays and packaging. Devices from opened packaging will always need to be baked prior to use. This can create a 12-24hr production delay.

## SMT Odd-forms

Connectors, sockets, clips, inductors etc., should be provided in the manufacturer's original packaging. Many connectors can be provided Taped and Reeled or in trays with removable clips which facilitate placement pickup.

## PTH Components

Multiple leaded components must be supplied in tubes or in other suitable mechanical packaging, to afford their pins protection. Transformers should be supplied pressed into a sheet of conductive foam.

## Electrostatic Discharge Protection

All semiconductor components must be supplied in suitable ESD packaging to protect them from damage by Static discharge during normal handling and transit. Any components not suitably packaged against ESD will be subject to a Concession, no assurance of electrical integrity can be given.

## Mechanical Protection

Material must be shipped in suitable mechanical packaging to protect the components from mechanical damage during transit.

## Moisture Sensitive Devices

Devices from opened packaging will always need to be baked prior to use. This can create a 12-24hr production delay, if possible, please supply a full unopened pack.

## Delivery

Packages must be clearly labelled with Part Number and quantity supplied. Any substituted alternative parts should be clearly labelled.

